

This pamphlet was originally developed through a grant from Indiana's Soil and Water Conservation Committee, and was reprinted by the Indiana Department of Natural Resources, Division of Forestry. There is Soil and Water Conservation District (SWCD) in each of Indiana's 92 counties. To find the phone number and location of your SWCD office, look in the phone book under U.S. Government, USDA Natural Resources Conservation Service.

We appreciate the efforts and expertise of the following agencies that helped develop this pamphlet:

Marion County SWCD  
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Detailed information on outdoor lab development, including descriptions of more than 55 features, planning recommendations and many sample plans is available on the website of the Natural Resources Education Center, [www.in.gov/dnr/nrec](http://www.in.gov/dnr/nrec).

## TEACHING OUTDOORS ON YOUR SCHOOL SITE



## WHY TEACH OUTDOORS?

Every school has an outdoor classroom. Teaching outdoors can broaden your teaching methods and often reinforce and enhance many of the concepts you teach indoors. Most important, teaching outdoors allows both teachers and students to grow in understanding and appreciation of the natural environment.

## WHY USE YOUR SCHOOL SITE?

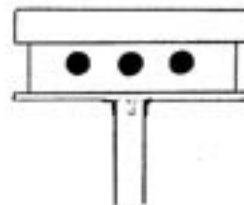
Your school site is convenient, available for short periods of time, and can be used consistently. Special preparations required for off-site field trips, such as transportation, can be eliminated. On-site activities also give students hands-on experiences necessary to understand difficult concepts.

## SITE INVENTORY CHECKLIST

Excellent learning activities can be designed around many natural and man-made parts of your school grounds. Take some time to walk around your school property and notice the diversity. You may find grassy areas, paved surfaces, bare soil, trees, shrubby fence rows, wet marshy areas, creeks, and perhaps even tiny fossils embedded in the limestone facing of the school building. Use the following checklist to inventory potential study features on your school site.

___ Air	___ Fish	___ Rotten logs
___ Animals	___ Flowers	___ Sand
___ Animal tracks	___ Fossils	___ Scenic spot
___ Animal homes	___ Geometric shapes	___ Seeds
___ Aquatic plants	___ Grassy areas	___ Silt
___ Asphalt, concrete	___ Historical areas	___ Smells
___ Berry producing	___ Insects	___ Soil
___ Shrubs	___ Landscaped designs	___ Sounds
___ Bricks	___ Litter	___ Stumps
___ Brushy fence rows	___ Machines	___ Tree wounds
___ Clay	___ Marshy areas	___ Underground water
___ Colors	___ Microorganisms	___ Vines
___ Clouds	___ Oldest thing	___ Watershed
___ Coniferous plants	___ Plants for food	___ Weeds
___ Creek	___ and cover	___ Wildlife habitats
___ Deciduous plants	___ Plant succession	___ Wildlife travel
___ Decomposers	___ Pollution	___ lanes
___ Den trees	___ Pond	___ Wind
___ Drains	___ Rocks	___ Windbreaks
___ Erosion	___ Roots	___ Youngest thing

**NESTING BOXES** for birds and squirrels improve the opportunities for students to observe and study some of the natural characteristics of these wildlife species.



For more information write for "Artificial Homes for Wildlife," Indiana Department of Natural Resources, Division of Fish and Wildlife, 402 W. Washington, Room 273, Indianapolis, Indiana 46204.

**A ROCK PILE** or rock garden can present different rocks and minerals for student observation and study.

## OTHER POSSIBILITIES

Map and orienteering course  
Rotten log, decomposition study  
Tree grafting demonstration  
Trail construction  
Geometric shapes or maps painted  
on paved surfaces  
Estimation skills  
(heights, populations, etc.)  
Windmill  
Solar ovens  
Sundial  
Weather station  
Compost heap  
Horticultural plots  
Erosion control demonstrations



## MAKE A PLAN

Draw a map of your school site, and sketch your outdoor classroom.

**AGRICULTURAL CROPS** such as corn, wheat, and soybeans can be grown in small plots. A local farmer can usually provide you with seed. Harvest your small crop and then add it to the farmer's harvest. Follow the crop's use and possible foreign destination.

**SCHOOL BEAUTIFICATION** can involve a student-designed landscape project such as a bed of flower bulbs near the school building.

**BLINDFOLD STATIONS** can sharpen students' awareness of senses other than sight. Concentrate individually on smells, sounds, and feelings.

**A SMALL POND** can provide many hands-on learning experiences. It doesn't have to be large to be effective. Your local soil and water conservation district office can provide professional information and assistance on designing ponds.



A small, shallow pond can use a submersible pump to circulate the water over a small falls. An artificial liner such as polyethylene covered with 6 inches of soil will hold water and yet present a natural look. For additional information write for "A Pool for the Backyard," National Wildlife Federation, 1412 16th Street, N.W., Washington, D.C. 20036.

## HOW CAN YOU IMPROVE YOUR SCHOOL SITE?

Your site may already have many features that can be used for education, but you can usually enhance these spots or develop new ones. When planning changes for your site, keep the following points in mind.

### ● Two heads are better than one.

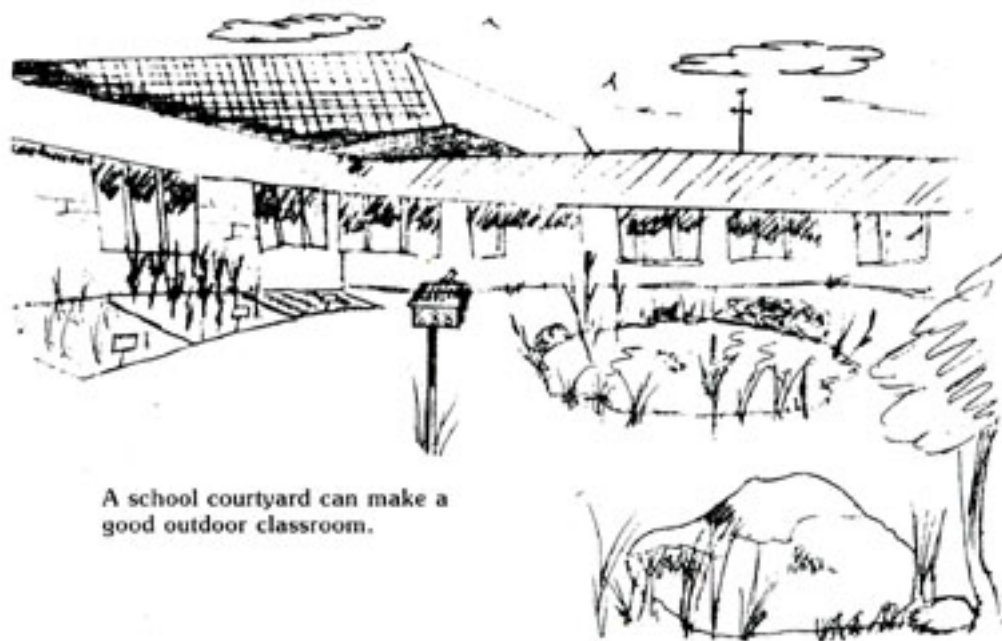
A committee of interested teachers, administrators, parents, and others can work much more effectively at implementing projects than one individual. Be sure to involve a representative of your school's custodial staff.

### ● Try to create diversity.

By establishing a variety of natural habits, you may attract many new plant and animal species to your school. Try developing representative plots of woodland, unmowed meadows, sandy dunes, bare eroded areas, agricultural crops, wetlands and hay fields. These areas can be demonstrated in plots as small as 8 feet by 8 feet. It will take time for these areas to mature, so plan carefully and be patient.

### ● Student Involvement.

When improvements are underway, let students do as much of the work as possible. The more students are involved, the more it becomes "their" outdoor classroom.



A school courtyard can make a good outdoor classroom.

## SOME POSSIBLE STUDY AREAS



**AN UNMOWED PLOT** left to grow along a fence, woods edge, stream, or in small islands can show successional growth and maturity of many plants and also become an attractive habitat for many insects and other animals.

**WET MARSHY AREAS** on school sites are usually looked upon as nuisances. However, they sometimes can offer good opportunities to study many aquatic plants and animals.



**GROUNDWATER TEST HOLES** allow your students to measure and record on graph paper the weekly fluctuation of groundwater in soils. Dig a four foot deep hole and insert a perforated plastic pipe into it to keep the soil from caving in. Cap the top of the pipe when not in use.

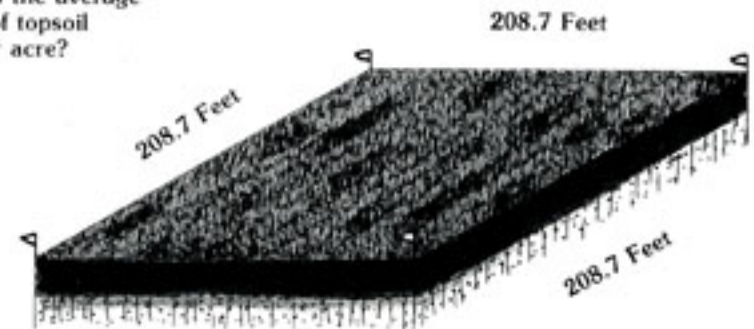
**ARCHAEOLOGICAL DIGS** can be developed in a plot of bare soil 15 feet by 15 feet. Students can uncover objects buried there by another class and then try to describe the civilization. This plot can also double as a soil study area.

**SCAVENGER HUNTS** on your site can involve everything from finding plant seeds to nondegradable litter.

**WATERSHED STUDIES** can determine where and how water leaves your school site. Watch it on a rainy day.

**A MEASURED ACRE** (208.7 feet by 208.7 feet) would allow students to see how big it is. Also try measuring a hectare in metrics.

What is the average depth of topsoil on your acre?



One Acre  
(43,560 sq. ft.)

**TREE AND SHRUB PLANTING** should include many species to add diversity to your site. They can also be planted as windbreaks and small tree plantations. If planting very many small trees, plant them in unmowed areas or space them in clearly marked rows so the mower can run between them. Remember to involve school grounds people in your planning.

**OUTDOOR SEATING AREA** can be used for many school functions. It can be as elaborate as a small amphitheater or as simple as old telephone poles laid in a circle.